

CERES Systems Engineering Committee

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Charter: Serve as a forum for resolving issues which affect more than one working group. Report to CERES Data Management Team

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Maria, Jill and Sue met at the DAAC with Fred Byrd and Brian Getzewich (Vertley Hopson was pulled away from the meeting). This meeting focused on improving the present method the LaTIS Processing System is now using to provide processing Runtime Parameters to CERES PGEs. At the present time the DAAC wrapper scripts contain hard-coded information. This method must be modified to provide increased flexibility at the time the DAAC is required to support the processing for more than one Instrument - when Terra is launched.

The Runtime Parameters required for all PGE's are: SamplingStrategies (SS), ProductionStrategies (PS), ConfigurationCodes (CC), Datadate, for all input/output Products. Maria has updated the internal paper: 'Proposal for Semi-Automated SS, PS, CC Implementation at LaTIS', see http://asd-www.larc.nasa.gov/ceres/intern_doc/. This paper describes the SS, PS, and CC requirements for each CERES PGE.

At Processing Request time, a document is submitted to the DAAC: 'CERES DMT to DAAC Processing Request', see: <http://asd-www.larc.nasa.gov/ceres/dmt2daac/>. This document contains the following:

1. PGEName, 2. Datadates to process, 3. Instrument to Process {ex. FM1},
4. ProductionStrategies for
 - a. (one) PS for Output Products
 - b. List of input PS per PGE dependency

Note: from Item 3, 'Instrument to Process', all of the PGE required SamplingStrategies must be defined.

Two options were discussed:

Option 1: Provide a DAAC environment file containing all of the required input/output for SamplingStrategies, ProductionStrategies, and CCodes for one datamonth. (The Datadates are typically typed at the command line.) An environment file must be PGE unique, for each Instrument.

This idea will work, but it is very labor intensive, and will present a great chance for typing errors.

Option 2: Add a set of tables to the existing Production Database to store production requirements. The tables described below will be used as a set of guidelines for the requirements that were brought out at the meeting. The final format for the tables will be determined by Fred Byrd and the SE committee.

The first table will be a SamplingStrategy Listing, requiring a set of two pointers for the SamplingStrategy and Instrument to be processed. Table 1 will contain pointers to Table 2, where the SamplingStrategy Components will be stored. The components will be supplied to each PGE as

Table 1: SamplingStrategy Listing

(SS)	PFM	FM1	FM2
SS1	ikey1	ikey2	ikey3

‘SAT’, ‘INST’, ‘IMAG’. Each Sampling Strategy will be configured, after the components are acquired, using:

SS# = \$SAT \- \$INST \- \$IMAG
for ikey1, SS1 = TRMM-PFM

The ‘Fixed SS’ column will contain CERES Independent SamplingStrategies, and the ‘jkey’ column is a pointer to Table 3, the Geostationary Satellites Table.

Table 2: List of SamplingStrategy Components

ikey#	SAT	INST	IMAG	Fixed SS	jkey
ikey1	TRMM	PFM	null	null	null
ikey2	Terra	FM1	null	null	null
ikey3	Terra	FM2	null	null	null
ikeyn	null	null	null	CERES	null
ikeym	null	null	null	null	jkey1

Table 3 contains the source of the Geostationary Satellites that are required for Subsystem 11 PGEs: CER11.1P1 - CER11.1P4. This table will be populated one (or twice) a month, when

Table 3: Geostationary Satellites

jkey#	year	month	Source1	Sat#	Source2	Sat#
jkey1	1998	6	Geos	9	Geos	10
jkey1	1998	7	Geos	10	null	null

ingest data has been received from a Geostationary source.

Table 4 is the ProductionStrategy/ConfigurationCode Table containing the following:

Table 4: PS/CC Table

PGE	Year	Mon.	SS	PS	CCode
1.1P1	1998	1	key1	Edition1	010001
1.1P1	1998	2	key1	Edition1	010002
1.1P1	1998	2	key1	Edition1	010003

This table will be populated once a month when the Production Request is submitted, and the ConfigurationCodes are determined. The main function of this table is to keep track of the 'latest' CCode for a PGE for each ProductionStrategy and SamplingStrategy submitted to process for each Datadate: Year and Month.

In the example above, the search for the Year, Month (1998,2) for PS = 'Edition1', and SS = key1, would find the largest CCode (010003) to use for the output of CER1.1P1. (Thus this would be the appropriate input CCode for the Target PGE CER1.2P1.)

The committee discussed the need for an additional table to store the external changes to the ConfigurationCode that have been recently implemented in production. Jill will begin documenting these changes.

Meeting Adjourned 11:45am mvm